

Kode Program Arduino

```
#include <SoftwareSerial.h>
#include <espduino.h>
#include <rest.h>

SoftwareSerial espPort(10, 11);
ESP esp(&espPort, &Serial, 9);
REST rest(&esp);
boolean wifiConnected = false;

const int relay1 = 2;
const int relay2 = 3;
const int relay3 = 4;
const int relay4 = 5;
const int relay5 = 6;
const int relay6 = 7;
const int relay7 = 8;
const int relay8 = 9;

boolean data1 = false;
boolean data2 = false;
boolean data3 = false;
boolean data4 = false;
boolean data5 = false;
boolean data6 = false;
boolean data7 = false;
boolean data8 = false;
int loop_count = 0;

char response[266];
char buff[64];
String strId, strData, strCode;
String strData_Last1, strData_Last2, strData_Last3, strData_Last4;

void(* resetFunc) (void) = 0;

void clearBuffer(void) {
    for (int i = 0; i < 266; i++) {
        response[i] = 0;
    }
}

void wifiCb(void* response)
{
    uint32_t status;
    RESPONSE res(response);
```

```

if(res.getArgc() == 1) {
  res.popArgs((uint8_t*)&status, 4);
  if(status == STATION_GOT_IP) {
    Serial.println("TERHUBUNG KE WIFI");

    wifiConnected = true;
  } else {
    wifiConnected = false;
  }
}

}

void setup() {
  pinMode(relay1, OUTPUT);
  pinMode(relay2, OUTPUT);
  pinMode(relay3, OUTPUT);
  pinMode(relay4, OUTPUT);
  pinMode(relay5, OUTPUT);
  pinMode(relay6, OUTPUT);
  pinMode(relay7, OUTPUT);
  pinMode(relay8, OUTPUT);

  digitalWrite(relay1,HIGH);
  digitalWrite(relay2,HIGH);
  digitalWrite(relay3,HIGH);
  digitalWrite(relay4,HIGH);
  digitalWrite(relay5,HIGH);
  digitalWrite(relay6,HIGH);
  digitalWrite(relay7,HIGH);
  digitalWrite(relay8,HIGH);

  Serial.begin(9600);
  espPort.begin(19200);

  esp.enable();
  delay(1000);
  esp.reset();
  delay(1000);
  while(!esp.ready());

  Serial.println("ARDUINO: Setup client");
  if(!rest.begin("api.thingspeak.com")) {
    Serial.println("ARDUINO: Gagal Setup client");
    while(1);
  }

  Serial.println("ARDUINO: Menghubungkan dengan Wifi");

```

```

esp.wifiCb.attach(&wifiCb);

esp.wifiConnect("Oppo X9009","google123");
Serial.println("ARDUINO: System sudah siap!");
}

void loop() {
loop_start:

esp.process();
if(wifiConnected) {

    char str_field1[6] , str_field2[6] , str_field3[6] , str_field4[6], str_field5[6], str_field6[6], str_field7[6],
    str_field8[6];
    loop_1:
    sprintf(buff, "/channels/236342/fields/1/last");
    Serial.println(buff);

    rest.get((const char*)buff);
    if(rest.getResponse(response, 266) == HTTP_STATUS_OK){

        strId = "";
        getData();

        if (strId == "1" || strId == "1.0" || strId == "1.00" ){
            digitalWrite(relay1,LOW);
            data1 = true;
        }

        if (strId == "0" || strId == "-1" || strId == "0.1" || strId == "0.10"){
            digitalWrite(relay1,HIGH);
            data1 = false;
        }
    }
    else{
        goto loop_1;
    }

    delay(1000);
    loop_2:
    sprintf(buff, "/channels/236342/fields/2/last");
    Serial.println(buff);

    rest.get((const char*)buff);
    if(rest.getResponse(response, 266) == HTTP_STATUS_OK){

        strId = "";
        getData();

```

```

if (strId == "1" || strId == "1.0" || strId == "1.00"){
    digitalWrite(relay2,LOW);
    data2 = true;
}

if (strId == "0" || strId == "-1" || strId == "0.1" || strId == "0.10"){
    digitalWrite(relay2,HIGH);
    data2 = false;
}
}
else{

    clearBuffer();
    goto loop_2;

}

delay(1000);
loop_3:
sprintf(buff, "/channels/236342/fields/3/last");
Serial.println(buff);

rest.get((const char*)buff);
if(rest.getResponse(response, 266) == HTTP_STATUS_OK){

    strId = "";
    getData();                // GET DATA

if (strId == "1" || strId == "1.0" || strId == "1.00"){
    digitalWrite(relay3,LOW);
    data3 = true;
}

if (strId == "0" || strId == "-1" || strId == "0.1" || strId == "0.10"){
    digitalWrite(relay3,HIGH);
    data3 = false;
}
}
else{

    clearBuffer();
    goto loop_3;

}

```

```

delay(1000);
loop_4:
sprintf(buff, "/channels/236342/fields/4/last");      // field x last Data
Serial.println(buff);

rest.get((const char*)buff);
if(rest.getResponse(response, 266) == HTTP_STATUS_OK){

    strId = "";
    getData();                                     // GET DATA

    if (strId == "1" || strId == "1.0" || strId == "1.00"){
        digitalWrite(relay4,LOW);
        data4 = true;
    }

    if (strId == "0" || strId == "-1" || strId == "0.1" || strId == "0.10"){
        digitalWrite(relay4,HIGH);
        data4 = false;
    }
}
else{
    clearBuffer();
    goto loop_4;
}

delay(1000);
loop_5:
sprintf(buff, "/channels/236342/fields/5/last");
Serial.println(buff);

rest.get((const char*)buff);
if(rest.getResponse(response, 266) == HTTP_STATUS_OK){

    strId = "";
    getData();

    if (strId == "1" || strId == "1.0" || strId == "1.00"){
        digitalWrite(relay5,LOW);
        data2 = true;
    }

    if (strId == "0" || strId == "-1" || strId == "0.1" || strId == "0.10"){
        digitalWrite(relay5,HIGH);
        data2 = false;
    }
}

```

```

}
}
else{

    clearBuffer();
    goto loop_5;
}

delay(1000);
loop_6:
sprintf(buff, "/channels/236342/fields/6/last");
Serial.println(buff);

rest.get((const char*)buff);
if(rest.getResponse(response, 266) == HTTP_STATUS_OK){

    strId = "";
    getData();

    if (strId == "1" || strId == "1.0" || strId == "1.00"){
        digitalWrite(relay6,LOW);
        data2 = true;
    }

    if (strId == "0" || strId == "-1" || strId == "0.1" || strId == "0.10"){
        digitalWrite(relay6,HIGH);
        data2 = false;
    }
}
else{

    clearBuffer();
    goto loop_6;
}

delay(1000);
loop_7:
sprintf(buff, "/channels/236342/fields/7/last");
Serial.println(buff);

rest.get((const char*)buff);
if(rest.getResponse(response, 266) == HTTP_STATUS_OK){

    strId = "";
    getData();

```

```

if (strId == "1" || strId == "1.0" || strId == "1.00"){
    digitalWrite(relay7,LOW);
    data2 = true;
}

if (strId == "0" || strId == "-1" || strId == "0.1" || strId == "0.10"){
    digitalWrite(relay7,HIGH);
    data2 = false;
}
}
else{

    clearBuffer();
    goto loop_7;

}

delay(1000);
loop_8:
sprintf(buff, "/channels/236342/fields/8/last");
Serial.println(buff);

rest.get((const char*)buff);
if(rest.getResponse(response, 266) == HTTP_STATUS_OK){

    strId = "";
    getData();

}

if (strId == "1" || strId == "1.0" || strId == "1.00"){
    digitalWrite(relay8,LOW);
    data2 = true;
}

if (strId == "0" || strId == "-1" || strId == "0.1" || strId == "0.10"){
    digitalWrite(relay8,HIGH);
    data2 = false;
}
}
else{

    clearBuffer();
    goto loop_8;

}

delay(1000);

```

```

        loop_count++;
        Serial.println("LOOP : ");
        Serial.println(loop_count);

    }

    else{
    }

}

void getData(){
    int i=0;

    for (i = 0; i < 10; i++){

        if((response[i] == '\r') || (response[i] == '\n')) {
        }
        else{
            strId += response[i];
        }

        if (response[i] == '\n'){
            i++;
            break;
        }
    }

    Serial.println("");
    Serial.print("ID : ");
    Serial.print(strId);
    Serial.println("");
}

boolean hardReset() {
    String tmpData;
}

```

Kode Program Web

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">

    <title>Laporan Akhir</title>

```



```

<link href="css/bootstrap.css" rel="stylesheet">

</head>
<style>
div.polaroid {
  margin: auto;
  width: 80%;
  background-color: white;
  box-shadow: 0 4px 8px 0 rgba(0, 0, 0, 0.2), 0 6px 20px 0 rgba(0, 0, 0, 0.19);
  margin-bottom: 25px;
}
img {
  border-radius: 8px;
}

div.polaroidbot {
  text-align: center;
  padding: 10px 20px;
}
</style>
<body>
<div class="container">
  <div class="container">
    <h1 style="text-align:center;">Laporan Akhir</h1>
    <br>
    <br>
    <br>
  </div>

  <div class="polaroid">
    
    <div class="polaroidbot">
      <p>Kendali Stop Kontak Melalui Internet. Anda Dapat dengan mudah mengendalikan perabotan
      rumah anda seperti Televisi, Pompa Air, Kulkas, Penanak Nasi, Kipas, Air Conditioner, dan peralatan
      lainnya yang terhubung langsung dengan Stop Kontak A.K.A memerlukan listrik</p>
    </div>
  </div>

  <div class="container">
    <br>
    <br>
  </div>
  <div class="container">
    <table style="width:100%">
      <tr>
        <td style="text-align: right;width:40%"><a href=https://<?php
$url1='https://api.thingspeak.com//channels/236342/fields/1/last';
$data=file_get_contents($url1);

```

```

if ($data == "1") {
    echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field1=0";
} else {
    echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field1=1";
} ?> target="iframe_a"><button class="btn btn-default"
onClick="document.location.reload(true)">Relay 1</button></a></td>
    <td style="width:20%"></td>
    <td style="width:40%"><?php
$url2='https://api.thingspeak.com//channels/236342/fields/1/last';
$data=file_get_contents($url2);
if ($data == "1") {
    echo "Hidup";
} else {
    echo "Mati";
} ?>
</td>
</tr>
<tr>
    <td style="text-align: right;width:40%"><a href=https://<?php
$url3='https://api.thingspeak.com//channels/236342/fields/2/last';
$data=file_get_contents($url3);
if ($data == "1") {
    echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field2=0";
} else {
    echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field2=1";
} ?> target="iframe_a"><button class="btn btn-default"
onClick="document.location.reload(true)">Relay 2</button></a></td>
    <td style="width:20%"></td>
    <td style="width:40%"><?php
$url4='https://api.thingspeak.com//channels/236342/fields/2/last';
$data=file_get_contents($url4);
if ($data == "1") {
    echo "Hidup";
} else {
    echo "Mati";
} ?></td>
</tr>
<tr>
    <td style="text-align: right;width:40%"><a href=https://<?php
$url5='https://api.thingspeak.com//channels/236342/fields/3/last';
$data=file_get_contents($url5);
if ($data == "1") {
    echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field3=0";
} else {
    echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field3=1";
} ?> target="iframe_a"><button class="btn btn-default"
onClick="document.location.reload(true)">Relay 3</button></a></td>
    <td style="width:20%"></td>

```

```

        <td style="width:40%"><?php
$url6='https://api.thingspeak.com//channels/236342/fields/3/last';
$data=file_get_contents($url6);
if ($data == "1") {
    echo "Hidup";
} else {
    echo "Mati";
} ?></td>
</tr>
<tr>
    <td style="text-align: right;width:40%"><a href=https://<?php
$url7='https://api.thingspeak.com//channels/236342/fields/4/last';
$data=file_get_contents($url7);
if ($data == "1") {
    echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field4=0";
} else {
    echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field4=1";
} ?> target="iframe_a"><button class="btn btn-default"
onClick="document.location.reload(true)">Relay 4</button></a></td>
        <td style="width:20%"></td>
        <td style="width:40%"><?php
$url8='https://api.thingspeak.com//channels/236342/fields/4/last';
$data=file_get_contents($url8);
if ($data == "1") {
    echo "Hidup";
} else {
    echo "Mati";
} ?></td>
</tr>
<tr>
    <td style="text-align: right;width:40%"><a href=https://<?php
$url9='https://api.thingspeak.com//channels/236342/fields/5/last';
$data=file_get_contents($url9);
if ($data == "1") {
    echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field5=0";
} else {
    echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field5=1";
} ?> target="iframe_a"><button class="btn btn-default"
onClick="document.location.reload(true)">Relay 5</button></a></td>
        <td style="width:20%"></td>
        <td style="width:40%"><?php
$url10='https://api.thingspeak.com//channels/236342/fields/5/last';
$data=file_get_contents($url10);
if ($data == "1") {
    echo "Hidup";
} else {
    echo "Mati";
} ?></td>

```

```

</tr>
<tr>
  <td style="text-align: right; width: 40%"><a href=https://<?php
$url11=https://api.thingspeak.com//channels/236342/fields/6/last';
$data=file_get_contents($url11);
if ($data == "1") {
  echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field6=0";
} else {
  echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field6=1";
} ?> target="iframe_a"><button class="btn btn-default"
onClick="document.location.reload(true)">Relay 6</button></a></td>
  <td style="width: 20%"></td>
  <td style="width: 40%"><?php
$url12=https://api.thingspeak.com//channels/236342/fields/6/last';
$data=file_get_contents($url12);
if ($data == "1") {
  echo "Hidup";
} else {
  echo "Mati";
} ?></td>
</tr>
<tr>
  <td style="text-align: right; width: 40%"><a href=https://<?php
$url13=https://api.thingspeak.com//channels/236342/fields/7/last';
$data=file_get_contents($url13);
if ($data == "1") {
  echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field7=0";
} else {
  echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field7=1";
} ?> target="iframe_a"><button class="btn btn-default"
onClick="document.location.reload(true)">Relay 7</button></a></td>
  <td style="width: 20%"></td>
  <td style="width: 40%"><?php
$url14=https://api.thingspeak.com//channels/236342/fields/7/last';
$data=file_get_contents($url14);
if ($data == "1") {
  echo "Hidup";
} else {
  echo "Mati";
} ?></td>
</tr>
<tr>
  <td style="text-align: right; width: 40%"><a href=https://<?php
$url15=https://api.thingspeak.com//channels/236342/fields/8/last';
$data=file_get_contents($url15);
if ($data == "1") {
  echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field8=0";
} else {

```

```

        echo "api.thingspeak.com/update?key=KWK24V4E5I9RBNZ0&field8=1";
    } ?> target="iframe_a"><button class="btn btn-default"
onClick="document.location.reload(true)">Relay 8</button></a></td>
        <td style="width:20%"></td>
        <td style="width:40%"><?php
$url16='https://api.thingspeak.com//channels/236342/fields/8/last';
$data=file_get_contents($url16);
if ($data == "1") {
    echo "Hidup";
    } else {
    echo "Mati";
    } ?></td>
</tr>
</div>
<iframe src="demo_iframe.htm" height="200" width="300" name="iframe_a" hidden></iframe>

<!-- jQuery (necessary for Bootstrap's JavaScript plugins) -->
<script src="https://ajax.googleapis.com/ajax/libs/jquery/1.11.3/jquery.min.js"></script>
<!-- Include all compiled plugins (below), or include individual files as needed -->
<script src="js/bootstrap.min.js"></script>

        <!-- Div Modal -->
        <div id="myModal" class="modal fade" role="dialog">
<div class="modal-dialog">

        <!-- Modal content-->
        <div class="modal-content">
            <div class="modal-header">
                <h4 class="modal-title">Modal Header</h4>
            </div>
            <div class="modal-body">
                <p>Some text in the modal.</p>
                <button type="button" class="btn btn-default" data-dismiss="modal">Close</button>
            </div>
            <div class="modal-footer">

        </div>
    </div>

</div>
</div>
<br>
<br>
<br>
</body>
</html>

```